

VALENCE ELECTRONS

Name _____

Valence electrons are the electrons in the outermost principal energy level. They are always "s" or "s and p" electrons. Since the total number of electrons possible in s and p levels is eight, there can be no more than eight valence electrons.

Determine the number of valence electrons in the atoms below.

Example: carbon

Electron configuration is $1s^2$ $2s^2 2p^2$.

Carbon has 4 valence electrons.

1. fluorine _____

11. lithium _____

2. phosphorus _____

12. zinc _____

3. calcium _____

13. carbon _____

4. nitrogen _____

14. iodine _____

5. iron _____

15. oxygen _____

6. argon _____

16. barium _____

7. potassium _____

17. aluminum _____

8. helium _____

18. hydrogen _____

9. magnesium _____

19. xenon _____

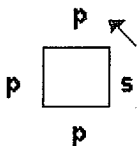
10. sulfur _____

20. copper _____

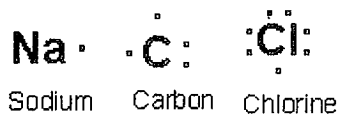
Name _____ Date _____ HR _____

Lewis Dot Structures

Lewis dot diagrams are a simplified way to show how the electrons are arranged in their outer shell. This is where the chemical reactions take place. Dots are placed around the element symbol in the following way:



Here are some examples:



Draw the Lewis Dot Structures for elements 1-18:

H	He	Li	Be	B	C
N	O	F	Ne	Na	Mg
Al	Si	P	S	Cl	Ar